Access DB# _____

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Deborah Londbin Examiner #: 7130 Date: 6/3/03
Art Unit: 1626 Phone Number 30 8-4522 Serial Number: 09/856,66
Mail Box and Bldg/Room Location: CM1 3E03 Results Format Preferred (circle): PAPER DISK E-MAIL

If mor than one search is submitted, please prioritize searches in order of need.

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

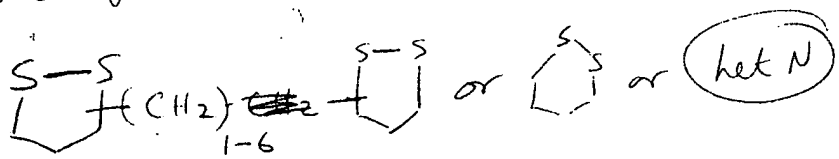
Title of Invention: Scavenger Complds

Inventors (please provide full names): Abdullah Itay - Yehia

Earliest Priority Filing Date: _____

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Paula, can you search these compds.



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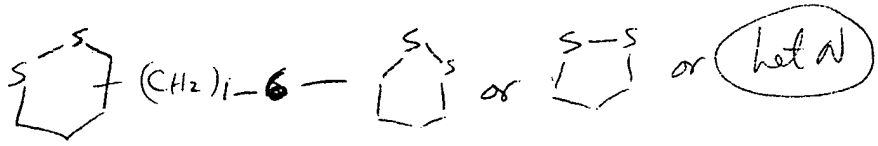

X CH2 can be substituted or unsubstituted
w/
- C=O—OH
- OH
- CH2 NH2
- CH2-OH etc.

Thanks Deb

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STAFF USE ONLY

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Searcher Location: _____
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PTO-1590 (8-01)

STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 95[illegible]

TO:	From:
Deborah Lambkin Location: Art Unit: 1626 June 5, 2003 Case Serial Number: 856610	P. Sheppard Location: CM1-1E03 Phone: (703) 308-4499 sheppard@uspto.gov

Search Notes

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FILE 'HCAPLUS' ENTERED AT 16:21:42 ON 05 JUN 2003
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FILE COVERS 1907 - 5 Jun 2003  VOL 138 ISS 23
FILE LAST UPDATED: 4 Jun 2003  (20030604/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


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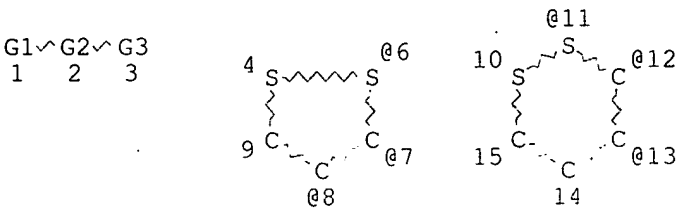


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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS  14

STEREO ATTRIBUTES: NONE
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=> d ibib abs hitrn l4 1-16

L4   ANSWER 1 OF 16  HCAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:        2002:835614  HCAPLUS
TITLE:                   Product class 7: 1,2-dithiolium salts and related
                         compounds
```

AUTHOR(S): Pedersen, C. Th.
CORPORATE SOURCE: Dep. Chem., Odense Universitet, Odense, Den.
SOURCE: Science of Synthesis (2002), 11, 107-189
CODEN: SSCYJ9
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. Synthesis and reactions of simple and condensed 1,2-dithiolium compds. are reviewed. Reactions covered include condensations, heterocyclizations, oxidns., cyclizations, and substitution reactions.
IT INDEXING IN PROGRESS
IT **66315-05-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of [(dithiolylidene)methyl]oxadithiapentalenes from pyrantrione and 3-methylsulfanyl-1,2-dithiolium salts)
IT **66315-06-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(sulfuration of [(dithiolylidene)methyl]oxadithiapentalene by P2S5)
REFERENCE COUNT: 333 THERE ARE 333 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1990:414570 HCAPLUS
DOCUMENT NUMBER: 113:14570
TITLE: Photoextrusion of ethylene from 1,2,6,9-tetrathiacyclododecane via a bis-sulfuranyl 1,4-biradical
AUTHOR(S): Anklam, Elke; Margaretha, Paul
CORPORATE SOURCE: Bereich Strahlenchem., Hahn Meitner Inst. Berlin G.m.b.H., Berlin, D-1000/39, Germany
SOURCE: Journal of Chemical Research, Synopses (1990), (5), 168
CODEN: JRPSDC; ISSN: 0308-2342
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Irradn. of 1,2,6,9-tetrathiacyclododecane gives ethylene and 1,2-dithiolane in quant. yields via a bis-sulfuranyl 1,4-diradical.
IT **127559-92-6P**
RL: PRP (Properties); PREP (Preparation)
(formation and cleavage of exocyclic sulfur-carbon bond of, in photodissocn. of tetrathiacyclododecane with formation of ethylene and dithiolane)

L4 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1988:177660 HCAPLUS
DOCUMENT NUMBER: 108:177660
TITLE: The crystal structures of C33H23S4I3 and C9H7S2I3: triiodide salts of positively charged unsaturated cyclic disulfides
AUTHOR(S): Hordvik, Asbjoern; Jynge, Knut; Hansen, Lars K.
CORPORATE SOURCE: Inst. Math. Phys. Sci., Univ. Tromsoe, Tromso, N-9001, Norway
SOURCE: Acta Chemica Scandinavica, Series A: Physical and Inorganic Chemistry (1988), A42(1), 79-86
CODEN: ACAPCT; ISSN: 0302-4377
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The crystal structures of C33H23S4I3, 5-phenyl-3-[1,3-diphenyl-3-(5-phenyl-1,2-dithiol-3-ylidene)prop-2-enyl]-1,2-dithiol-1-ium triiodide, (I) and C9H7S2I3, 4-phenyl-1,2-dithiol-1-ium triiodide, (II) were detd. by x-ray anal. I is monoclinic, space group I2/c, with a 28.254(5), b 9.627(2), c 25.283(6) .ANG., and .beta. 105.50(2).degree.; Z = 8; final R = 0.05. II

is monoclinic, space group Ia, with a 8.882(1), b 24.565(3), c 6.387(1) .ANG., and .beta. 90.02(2).degree.; Z = 4; final R = 0.05. At. coordinates are given. There are 2 different I3- ions in I, both in 2-fold positions. The I-I distances are 2.920(1) .ANG. in one and 2.935(1) .ANG. in the other. The corresponding I-I-I angles are 180.0 and 175.0(2).degree.. There are 2 unsatd. 5-membered disulfide rings in the cation of I, each carrying 1/2 pos. charge. The av. S-S and C-S bond lengths in the rings are 2.048(5) and 1.726(12) .ANG.. There are 3 S...I close contacts. The I-I bond lengths in II are 2.876(6) and 2.973(5) .ANG., with I-I-I angle 178.3(2).degree.. There are I...S close contacts in linear and triangular arrangements.

IT **113944-86-8**
RL: PRP (Properties)
(crystal structure of)

L4 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1982:471636 HCAPLUS
DOCUMENT NUMBER: 97:71636
TITLE: Studies of the electronic structure of conductive organic crystals and its relationship to electrical conductivity
AUTHOR(S): Zhang, Qiyuan; Yan, Jimin; Wang, Zuoxin; Wu, Gaozhen; Pan, Qiangyu; Gao, Zhidi
CORPORATE SOURCE: Inst. Chem., Acad. Sinica, Beijing, Peop. Rep. China
SOURCE: Huaxue Xuebao (1982), 40(2), 111-23
CODEN: HHHPA4; ISSN: 0567-7351
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB The elec. cond. of 54 org. crystals was studied with respect to their electronic structure by correlation with energy, symmetry match, and max. overlap of the frontier orbitals. The energy spectra and the LCAO-MO coeffs. were also calcd.

IT **81731-56-8D**, derivs.
RL: PRP (Properties)
(elec. cond. of, electron structure in relation to)

L4 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1979:152080 HCAPLUS
DOCUMENT NUMBER: 90:152080
TITLE: 3-Methylthio-1,2-dithiolylium salts. II. Reaction with 4-hydroxy-3H-pyran-2,6-dione. 1,3-bis-(1,2-dithiol-3-ylidene)-2-propanones
AUTHOR(S): Frandsen, Erik G.
CORPORATE SOURCE: Dep. Chem., Odense Univ., Odense, Den.
SOURCE: Tetrahedron (1978), 34(14), 2175-8
CODEN: TETRAB; ISSN: 0040-4020
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

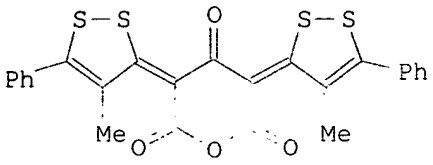
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Condensation of dithiolylium salts I (R = H, R1 = Ph, C6H4Br-4, CMe3; R = Me, Ph, R1 = Ph) and II with acetonedicarboxylic acid anhydride gave 54-91% resp.bis condensation products, which on hydrolysis-decarboxylation (concd. H2SO4, 150.degree.) gave 1,3-bis(1,2-dithiol-3-ylidene)-2-propanones III and IV. The condensation product from I (R = R1 = Ph) gave, on decarboxylation-hydrolysis, 80% cyclized product V.

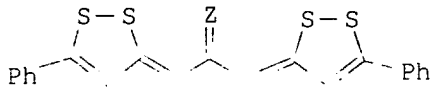
IT **69856-50-4P 69856-51-5P 69856-52-6P 69856-53-7P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L4 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1978:170012 HCAPLUS
DOCUMENT NUMBER: 88:170012
TITLE: 1,3-Bis-(4-methyl-5-phenyl-1,2-dithiol-3-ylidene)propane-2-thione, a five-sulfur compound related to 1,6,6a.lambda.4-trithiapentalenes
AUTHOR(S): Frandsen, Erik G.
CORPORATE SOURCE: Dep. Chem., Odense Univ., Odense, Den.
SOURCE: Journal of the Chemical Society, Chemical Communications (1977), (23), 851-2
CODEN: JCCCAT; ISSN: 0022-4936
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I



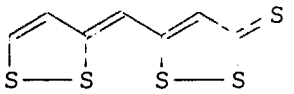
II

AB Condensation of 3-methylthio-4-methyl-5-phenyl-1,2-dithiolylium iodide with 4-hydroxy-3H-pyran-2,6-dione gave the trione I which on acidic hydrolysis gave the propanone II (Z = O). Reaction of II (Z = O) with P4S10 gave the title compd. (II; Z = S).

IT **66315-05-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and sulfuration of)

IT **66315-06-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L4 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1977:71497 HCAPLUS
DOCUMENT NUMBER: 86:71497
TITLE: Structures of linear multisulfur systems. X. Sulfur-sulfur bonding in compounds with four and five collinear sulfur atoms. A discussion based on MO-calculations
AUTHOR(S): Sletten, Jorunn
CORPORATE SOURCE: Dep. Chem., Univ. Bergen, Bergen, Norway
SOURCE: Acta Chemica Scandinavica, Series A: Physical and Inorganic Chemistry (1976), A30(6), 397-404
CODEN: ACAPCT; ISSN: 0302-4377
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



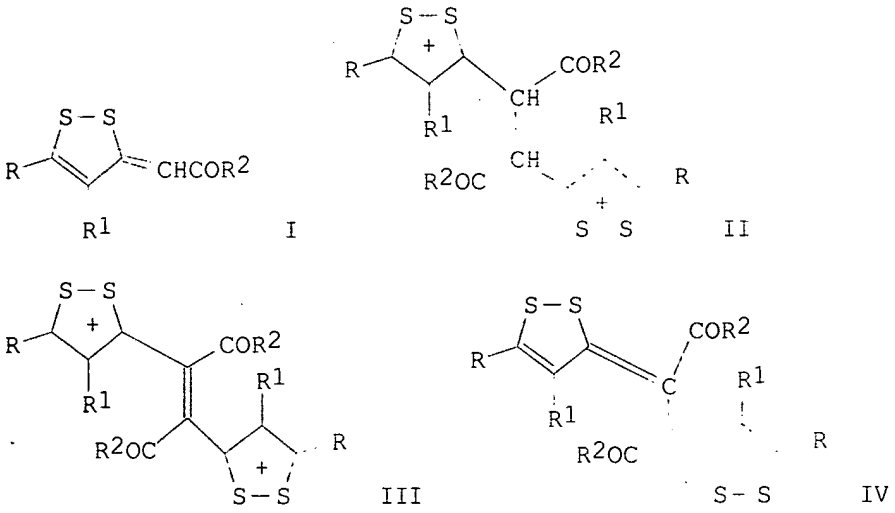
I

II

AB CNDO/2 calcns. were performed on a series of mols. contg. 4 and 5 colinear S atoms, e.g., I and II. The equil. geometries and charge distributions were calcd.; comparison of theor. results with exptl. data from x-ray crystallographic structure detns. showed that the CNDO/2 method is able to predict cases in which partial bonding between S atoms occurs. The geometrical arrangements predicted for the S sequences are closely related to those predicted for linear polyhalogen compds.

IT **61760-13-2 61760-14-3 61760-16-5**
RL: PRP (Properties)
(electron configuration and bond lengths in)

L4 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1976:576574 HCAPLUS
DOCUMENT NUMBER: 85:176574
TITLE: The electrochemistry of organic sulfur compounds. Part VI. The anodic dimerization of .alpha.-(1',2'-dithiol-3'-ylidene)acetophenones
AUTHOR(S): Pedersen, Carl T.; Parker, Vernon D.; Hammerich, Ole
CORPORATE SOURCE: Dep. Chem., Odense Univ., Odense, Den.
SOURCE: Acta Chemica Scandinavica, Series B: Organic Chemistry and Biochemistry (1976), B30(6), 478-84
CODEN: ACBOCV; ISSN: 0302-4369
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



AB One electron oxidn. of I (R = Ph, p-Me3CC6H4, p-MeOC6H4, H; R1 = H, Ph, p-MeC6H4; R2 = Ph, p-BrC6H4) was accompanied by the formation of the corresponding dimeric dications (II), which were not capable of undergoing further electrochem. oxidn. Reaction of II with 2,3-dichloro-5,6-dicyano-1,4-benzoquinone resulted in H abstraction and formation of a new dication (III), which upon electrochem. redn. gave the uncharged dimer of I, the bi[.alpha.-(1',2'-dithiol-3'-ylidene)phenacyl] (IV). The effect of substitution on the reaction is discussed.

IT **60822-89-1 60822-90-4 60822-91-5**
60822-92-6 60822-93-7 60822-94-8
60855-13-2
RL: PROC (Process)
(reaction with dichlorodicyanobenzoquinone and voltammetry of)

IT **60822-95-9 60822-96-0 60822-97-1**
60822-98-2 60822-99-3 60823-00-9

60855-12-1
RL: PROC (Process)
(voltammetry of)

L4 ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1974:16415 HCAPLUS
DOCUMENT NUMBER: 80:16415
TITLE: LCAO MO calculations of sulfur-containing .pi.-electron systems. XXXIII. Absorption behavior of sulfur-heterocyclic polymethine dyes
AUTHOR(S): Fabian, J.; Hartmann, H.
CORPORATE SOURCE: Sekt. Chem., Tech. Univ., Dresden, Ger. Dem. Rep.
SOURCE: Tetrahedron (1973), 29(17), 2597-608
CODEN: TETRAB; ISSN: 0040-4020
DOCUMENT TYPE: Journal
LANGUAGE: German
AB The long-wavelength absorptions of ionic S-contg. polymethine dyes were detd. and discussed using the concepts of iso-.pi.-electron count and color-detg. factors in polymethine chains. The limits of both concepts were indicated and the relations between color and constitution interpreted by quantum chem. .pi.-methods.
IT **46201-05-2 47304-31-4**
RL: PRP (Properties)
(electronic absorption spectra of)
IT **47304-31-4 50962-64-6 50962-67-9**
RL: PRP (Properties)
(electronic absorption spectra of, calcn. of)

L4 ANSWER 10 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1973:505115 HCAPLUS
DOCUMENT NUMBER: 79:105115
TITLE: Heterocyclic sulfur compounds. LXIV. Rearrangement of 5-[(1,2-dithiol-3-ylidene)methyl]-1,2-dithiolylium cations
AUTHOR(S): Lemarie-Retour, Chantal; Stavaux, Madeleine; Lozac'h, Noel
CORPORATE SOURCE: Dep. Chim., Univ. Caen, Caen, Fr.
SOURCE: Bulletin de la Societe Chimique de France (1973), (5) (Pt. 2), 1659-65
CODEN: BSCFAS; ISSN: 0037-8968
DOCUMENT TYPE: Journal
LANGUAGE: French
GI For diagram(s), see printed CA Issue.
AB The dithiolylidenemethyldithiolium salts I (R = CMe3, Ph, p-MeOC6H4, p-ClC6H4; R1 = Me, CMe3, Ph, p-MeOC6H4; X = I, I3) were obtained by heating II with III. On heating in pyridine I rearranged to IV (X = S) which were oxidized to IV (X = O) with PhCNO. The rearrangement mechanism of I to IV is discussed.
IT **5676-45-9P 35093-36-8P 50412-87-8P**
50412-88-9P 50412-89-0P 50558-13-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L4 ANSWER 11 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1973:57246 HCAPLUS
DOCUMENT NUMBER: 78:57246
TITLE: LCAO-MO calculations of sulfur-containing .pi.-systems. 29. Protonation of bisdithiolomonomethines
AUTHOR(S): Fabian, Juergen; Hartmann, Horst
CORPORATE SOURCE: Sekt. Chem., Tech. Univ. Dresden, Dresden, Ger. Dem. Rep.
SOURCE: Zeitschrift fuer Chemie (1972), 12(9), 349-51

CODEN: ZECEAL; ISSN: 0044-2402
DOCUMENT TYPE: Journal
LANGUAGE: German
GI For diagram(s), see printed CA Issue.
AB The intensively colored solns. of the methines I [R, R4 = H or Ph; R1 = H or Me; R2 = H, Ph, COPh, or CO2Et; R3 = H; RR1 = benzo; R2R3 = CH2CH2 or (CH2)3] and II (R, R3 = Ph; R1, R2 = H; or RR1 or R2R3 = 1-cyclohexen-1,2-ylene) in org. solvents absorbed light of 520-630 nm, while solns. of I and II in mineral acids remained colorless due to protonation. A comparison of the uv and visible spectra of I and II with those of III and IV indicated that the protonation of I and II proceeded in the meso-position to give the derivs. V and VI, resp. V and VI absorbed more intensely and at higher wavelengths than I and II owing to the interannular, nonbonding S-S interactions, as confirmed by .pi.-MO PPP calcns.
IT **39858-92-9 39858-93-0 39858-94-1**
39859-00-2 39859-01-3 39945-12-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(protonation of, uv and visible spectra in relation to)
IT **39859-06-8 39859-07-9 39859-08-0**
39921-41-0
RL: PRP (Properties)
(uv and visible spectra of)

L4 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1972:72440 HCAPLUS
DOCUMENT NUMBER: 76:72440
TITLE: Rearrangement of 3-aryl-5-[(5-aryl-1,2-dithiol-3-ylidene)methyl]-1,2-dithiolium cations
AUTHOR(S): Retour, Chantal; Stavaux, Madeleine; Lozac'h, Noel
CORPORATE SOURCE: Dep. Chim., Univ. Caen, Caen, Fr.
SOURCE: Bulletin de la Societe Chimique de France (1971), (9), 3360-1
CODEN: BSCFAS; ISSN: 0037-8968
DOCUMENT TYPE: Journal
LANGUAGE: French
GI For diagram(s), see printed CA Issue.
AB I rearrange to 5-aryl-2-(5-aryl-1,2-dithiol-3-ylidene)-2,3-dihydrothiophene-3-thiones (II). A mixt. of I (Ar = Ph, X = ClO4) and pyridine is refluxed to give II (Ar = Ph). II (Ar = Ph) and II (Ar = p-anisyl) are obtained from the corresponding I (X = iodine). Probably, 3-methylthio-1,2-dithioliums react with malonic acid to give II via I.
IT **13402-74-9 35093-36-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(rearrangement of)

L4 ANSWER 13 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1968:115676 HCAPLUS
DOCUMENT NUMBER: 68:115676
TITLE: Dithiole series. III. Dithiolocyanines
AUTHOR(S): Easton, D. B. J.; Leaver, Derek; McKinnon, David M.
CORPORATE SOURCE: Univ. Edinburgh, Edinburgh, UK
SOURCE: Journal of the Chemical Society [Section] C: Organic (1968), (6), 642-4
CODEN: JSOOAX; ISSN: 0022-4952
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB Methinecyanines were prepd. from 1,2- and 1,3-dithiolium salts. The violet compd., previously thought to be a C-betaine derived from bis[3-(benzo-1,2-dithiole)]methinecyanine, is shown to be 2-(benzo-1,2-dithiol-3-ylidene)-2,3-dihydrobenzo[b]thiophene-3-thione (I). Two by-products, obtained during an unambiguous synthesis of the latter

compd., are shown to be derivs. (II, X = S, O) of 6H-dibenzo[b,f]thieno[3,2-b]thiopyran.

IT **14969-68-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L4 ANSWER 14 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1967:105899 HCAPLUS
DOCUMENT NUMBER: 66:105899
TITLE: Dithiolium compounds
INVENTOR(S): Klingsberg, Erwin
PATENT ASSIGNEE(S): American Cyanamid Co.
SOURCE: U.S., 3 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3299055		19670117	US	19630802

GI For diagram(s), see printed CA Issue.

AB Compds. of the general formulas I and II are dyes for polyacrylonitriles. Thus, a mixt. of 1.9 g. 3-methylthio-5-phenyl-1,2-dithiolium methosulfate and 1.1 g. 3-methyl-5-phenyl-1,2-dithiolium chloride in 60 ml. alc. was warmed on a steam bath for 0.5 hr., chilled, and filtered to give violet I (X = Z = Ph, Y = H, Q = mixt. of Cl and MeSO4), m. 230.degree., violet on polyacrylonitrile; Q = ClO4 and Q = Br analogs, m. 232.degree. (decomp.) and 212.degree. (decomp.), resp. Similarly, other I were prepd. (X, Y, Z, Q, and shade given): H, Ph, Ph, Cl + iodide, violet [m. 150.degree. (decomp.) (AcOH)]; X + Y = benzo, Ph, Cl + iodide, purple; H, H, H, iodide, reddish violet; 4-Me2NC6H4, H, Ph, Cl + iodide, violet; Ph, Ph, Ph, Cl + iodide, purple. Similarly were prepd. II (same data given): H, H, Ph, Cl + iodide, violet (m. 163.degree.); Ph, H, Ph, MeSO4 + ClO4, violet; N + Y = benzo, Ph, Cl + iodide, purple; H, H, H, iodide, red-violet.

IT **14969-66-5 14969-69-8 14969-82-5**
15139-86-3 15139-87-4
RL: USES (Uses)
(mixt. contg.)

IT **14969-67-6P 14969-68-7P 14969-83-6P**
RL: IMF (Industrial manufacture); PREP (Preparation)
(prepn. of)

L4 ANSWER 15 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1966:456766 HCAPLUS
DOCUMENT NUMBER: 65:56766
ORIGINAL REFERENCE NO.: 65:10574f-h
TITLE: 1,2-Dithiolium cation. V. Higher no-bond resonance systems
AUTHOR(S): Klingsberg, Erwin
CORPORATE SOURCE: American Cyanamid Co., Bound Brook, NJ
SOURCE: Journal of Heterocyclic Chemistry (1966), 3(2), 243
CODEN: JHTCAD; ISSN: 0022-152X
DOCUMENT TYPE: Journal
LANGUAGE: English

GI For diagram(s), see printed CA Issue.

AB cf. CA 59, 12775g. Repetition of the vinylene thio group -CH:CHS would give rise to a succession of dithiole rings characterized by S no-bond resonance. The 1,2-dithiolium cation may be considered as the parent of the thiothiophene and higher systems. No-bond resonance in the 1,2-dithiolium ring would require the contributing form (I) in addn. to

the 5 ring forms already recognized. Condensation of 3-methylthio-5-phenyl-1,2-dithiolium iodide and 3-methyl-5-phenyl-1,2-dithiolium iodide in warm alc. literated MeSH and gave a good yield of a deep purple product (II III), m. 200-204.degree. (alc. contg. a trace of HI). The 4 S atoms were shown by x-ray analysis (Hordvik, CA 63, 17250g) to be nearly colinear with partial bonding of the internal pair at 3.00-3.10 A., thus suggesting contributing resonance forms and a no-bond resonance system next above thiothiophene.

IT **5676-45-9**, 1,2-Dithiol-1-ium, 3-phenyl-5-[(5-phenyl-3H-1,2-dithiol-3-ylidene)methyl]-, iodide
(prepn. of)

L4 ANSWER 16 OF 16 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1966:8031 HCAPLUS
DOCUMENT NUMBER: 64:8031
ORIGINAL REFERENCE NO.: 64:1442a-c
TITLE: Structure of 5-phenyl-3-(5-phenyl-1,2-dithiol-3-ylidenemethyl)-1,2-ditholium iodide
AUTHOR(S): Hordvik, Asbjoern
CORPORATE SOURCE: Univ. Bergen, Norway
SOURCE: Acta Chemica Scandinavica (1965), 19(5), 1253-4
CODEN: ACHSE7; ISSN: 0904-213X
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB Title compd. I, crystd. from MeOH in irregular growth, showed monoclinic crystals, space group P21/c, with a 5.25 (parallel to the needle axis), b 17.43, and c 23.26 A.; mol. wt. is 527 and d4 1.645 (indicating 1 mole MeOH of solvation). The Fourier map of the a projection gave well resolved S peaks, the electron d. map shows coplanar disulfide rings, 4 S atoms nearly colinear. Projected S-1-S-2 is 1.38, S-2-S-3 2.03 and S-3-S-4 1.35, with S-S bond in rings 2.05, and central S-2-S-3 distance 3.00-3.10 A. (van der Waals S radius is 3.70 A.).

IT **5676-45-9**, 1,2-Dithiol-1-ium, 3-phenyl-5-[(5-phenyl-3H-1,2-dithiol-3-ylidene)methyl]-, iodide
(crystal structure of)

=>
=>

=> fil caold
FILE 'CAOLD' ENTERED AT 16:21:56 ON 05 JUN 2003
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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907-1966
FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

This file supports REGistRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

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=> s l3
L5            4 L3

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=>

=> d all l5 1-4

L5   ANSWER 1 OF 4  CAOLD  COPYRIGHT 2003 ACS
AN   CA65:10574g  CAOLD
TI   1,2-dithiolium cation - (V) higher no-bond resonance systems
AU   Klingsberg, Erwin
IT   5676-45-9

L5   ANSWER 2 OF 4  CAOLD  COPYRIGHT 2003 ACS
AN   CA65:10574c  CAOLD
TI   three-membered ring system with two hetero atoms - (I) synthesis of 1
     .alpha.H-oxazirino-[2,3-.alpha.]quinoline derivs.
AU   Kaneko, Chikara; Yamada, S.
IT     83-34-1  10590-66-6  10590-67-7  10590-68-8  10590-69-9  10590-71-3
     10590-72-4  10590-73-5  13006-59-2  13402-74-9  95842-97-0

L5   ANSWER 3 OF 4  CAOLD  COPYRIGHT 2003 ACS
AN   CA64:1442a  CAOLD
TI   structure of 5-phenyl-3-(5-phenyl-1,2-dithiol-3-ylidenemethyl)-1,2-
     dithiolium iodide
AU   Hordvik, Asbjoern
IT   5676-45-9

L5   ANSWER 4 OF 4  CAOLD  COPYRIGHT 2003 ACS
AN   CA55:514b  CAOLD
TI   synthesis of thiazole derivs. - (XIV) alcs. of the benzothiazole series
     and their transformations
AU   Zubarovskii, V. M.; Khodot, G. P.
IT    100-11-8   1515-83-9  32770-97-1  80936-82-9  99075-14-6  99846-82-9
     99849-18-0 101273-96-5 103204-21-3 103205-18-1 103261-69-4 103264-09-1
     103440-65-9 103646-25-9 103753-86-2 103754-68-3 103986-15-8 103989-03-3
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Property values tagged with IC are from the ZIC/VINITI data file
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STRUCTURE FILE UPDATES:    4 JUN 2003  HIGHEST RN 525536-93-0
DICTIONARY FILE UPDATES:   4 JUN 2003  HIGHEST RN 525536-93-0

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available.  See HELP
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PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

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6	RN	113944-86-8	REGISTRY
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DR    13402-74-9


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62

L3    ANSWER 1 OF 62  REGISTRY  COPYRIGHT 2003 ACS
RN    344275-66-7  REGISTRY
CN    2-Propanone, 1,3-bis(5-phenyl-3H-1,2-dithiol-3-ylidene)- (9CI)  (CA INDEX
      NAME)
FS    3D CONCORD
MF    C21 H14 O S4
SR    Reaction Database
LC    STN Files:   CASREACT
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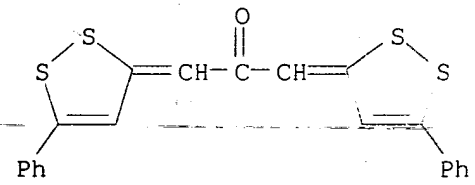


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**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**


L3    ANSWER 2 OF 62  REGISTRY  COPYRIGHT 2003 ACS
RN    343971-84-6  REGISTRY
CN    2-Propanone, 1,3-bis[5-(1,1-dimethylethyl)-3H-1,2-dithiol-3-ylidene]-
      (9CI)  (CA INDEX NAME)
FS    3D CONCORD
MF    C17 H22 O S4
SR    Reaction Database
LC    STN Files:   CASREACT
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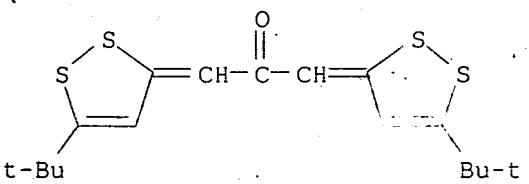


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**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**
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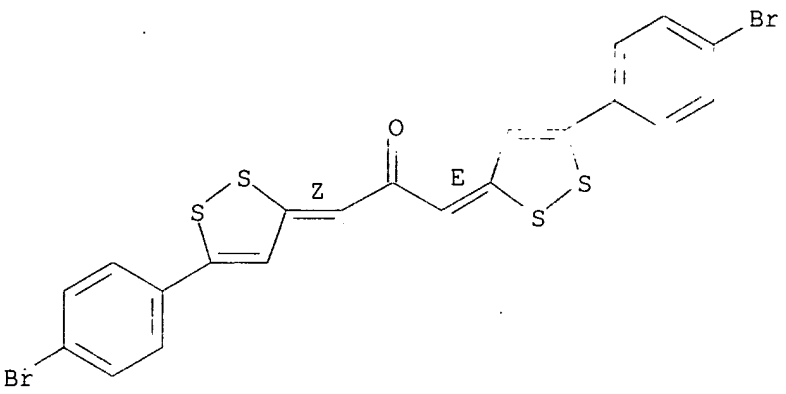
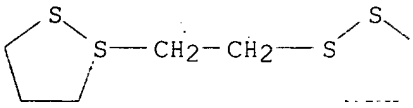
L3 ANSWER 3 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 343960-69-0 REGISTRY
CN 2-Propanone, 1,3-bis[5-(4-bromophenyl)-3H-1,2-dithiol-3-ylidene]-, (1E,3Z)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C21 H12 Br2 O S4
SR Reaction Database
LC STN Files: CASREACT

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

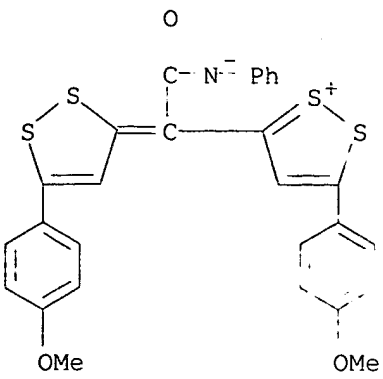
L3 ANSWER 4 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 127559-92-6 REGISTRY
CN 1,2-Dithiolan-1(1H)-yl, 1,1'-(1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)
MF C8 H16 S4
SR CA
LC STN Files: CA, CAPLUS



1 REFERENCES IN FILE CA (1957 TO DATE)
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 113:14570

L3 ANSWER 5 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 123005-79-8 REGISTRY
CN 1,2-Dithiole-.DELTA.3,.alpha.-acetimidic acid, .alpha.-[5-(p-methoxyphenyl)-1,2-dithiol-3-yl]-5-(p-methoxyphenyl)-N-phenyl-, inner salt (6CI) (CA INDEX NAME)
FS 3D CONCORD
MF C28 H21 N O3 S4
SR CAOLD
LC STN Files: CAOLD



1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 6 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 113944-86-8 REGISTRY
CN 1,2-Dithiol-1-ium, 3-[1,3-diphenyl-3-(5-phenyl-3H-1,2-dithiol-3-ylidene)-1-propenyl]-5-phenyl-, (E,E)-, (triiodide) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3H-1,2-Dithiole, 1,2-dithiol-1-ium deriv.
CN Iodide (I31-), (E,E)-3-[1,3-diphenyl-3-(5-phenyl-3H-1,2-dithiol-3-ylidene)-1-propenyl]-5-phenyl-1,2-dithiol-1-ium (9CI)
FS STEREOSEARCH
MF C33 H23 S4 . I3
SR CA
LC STN Files: CA, CAPLUS

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CRN 113944-85-7
CMF C33 H23 S4

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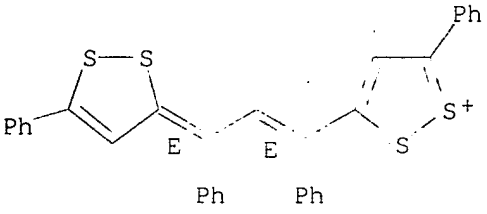

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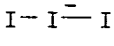
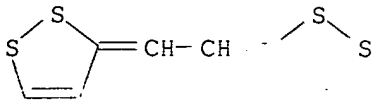
CRN 14900-04-0
CMF I3



1 REFERENCES IN FILE CA (1957 TO DATE)
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 108:177660

L3 ANSWER 8 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 81731-56-8 REGISTRY
CN 3H-1,2-Dithiole, 3,3'-(1,2-ethanediylidene)bis- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C8 H6 S4
LC STN Files: CA, CAPLUS



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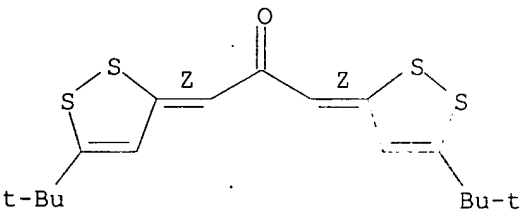
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 97:71636

L3 ANSWER 9 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 69856-53-7 REGISTRY
CN 2-Propanone, 1,3-bis[5-(1,1-dimethylethyl)-3H-1,2-dithiol-3-ylidene]-, (Z,Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3H-1,2-Dithiole, 2-propanone deriv.
FS STEREOSEARCH
MF C17 H22 O S4
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)

Double bond geometry as shown.



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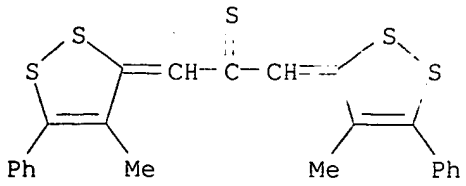
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 90:152080

L3 ANSWER 13 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 66315-06-8 REGISTRY
CN 2-Propanethione, 1,3-bis(4-methyl-5-phenyl-3H-1,2-dithiol-3-ylidene)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3H-1,2-Dithiole, 2-propanethione deriv.
FS 3D CONCORD
MF C23 H18 S5

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT
(*File contains numerically searchable property data)

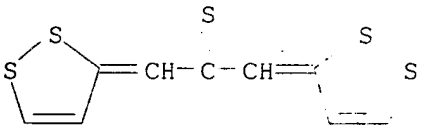


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1957 TO DATE)
2 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 88:170012

L3 ANSWER 15 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 61760-16-5 REGISTRY
CN 2-Propanethione, 1,3-bis(3H-1,2-dithiol-3-ylidene)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3H-1,2-Dithiole, 2-propanethione deriv.
FS 3D CONCORD
MF C9 H6 S5
LC STN Files: CA, CAPLUS

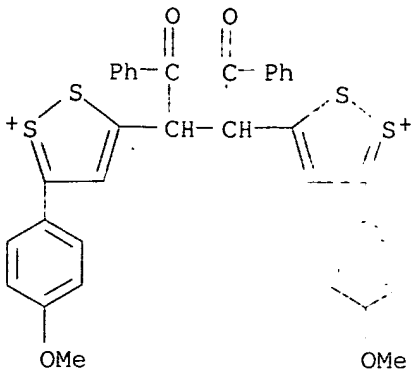


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1957 TO DATE)
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 86:71497

L3 ANSWER 18 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 60855-13-2 REGISTRY
CN 1,2-Dithiol-1-ium, 3,3'-(1,2-dibenzoyl-1,2-ethanediyl)bis[5-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C36 H28 O4 S4
LC STN Files: CA, CAPLUS

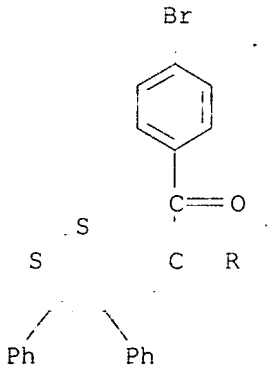


1 REFERENCES IN FILE CA (1957 TO DATE)
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 85:176574

L3 ANSWER 20 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 60823-00-9 REGISTRY
CN 1,4-Butanedione, 1,4-bis(4-bromophenyl)-2,3-bis(4,5-diphenyl-3H-1,2-dithiol-3-ylidene)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3H-1,2-Dithiole, 1,4-butanedione deriv.
MF C46 H28 Br2 O2 S4
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)

PAGE 1-A



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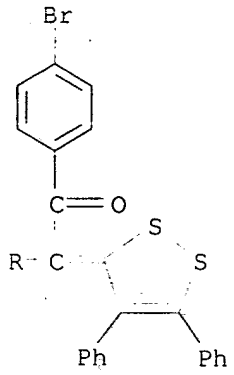
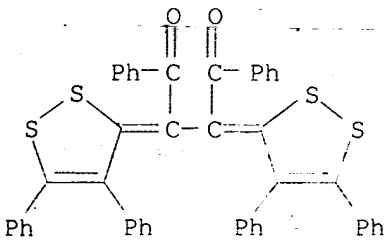


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1957 TO DATE)
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 85:176574

L3 ANSWER 21 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 60822-99-3 REGISTRY
CN 1,4-Butanedione, 2,3-bis(4,5-diphenyl-3H-1,2-dithiol-3-ylidene)-1,4-diphenyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3H-1,2-Dithiole, 1,4-butanedione deriv.
MF C46 H30 O2 S4
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)



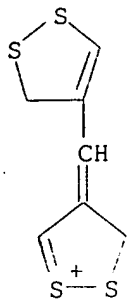
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1957 TO DATE)
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 85:176574

L3 ANSWER 32 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 50962-67-9 REGISTRY
CN 1,2-Dithiol-1-ium, 4-(3H-1,2-dithiol-4-ylmethylene)-3,4-dihydro- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3H-1,2-Dithiole, 1,2-dithiol-1-ium deriv.
FS 3D CONCORD

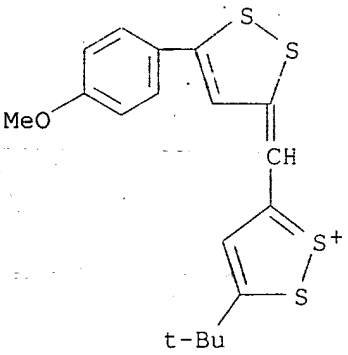
MF C7 H7 S4
LC STN Files: CA, CAPLUS



1 REFERENCES IN FILE CA (1957 TO DATE)
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 80:16415

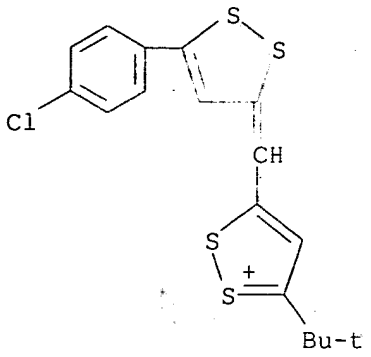
L3 ANSWER 33 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 50558-13-9 REGISTRY
CN 1,2-Dithiol-1-ium, 3-(1,1-dimethylethyl)-5-[[5-(4-methoxyphenyl)-3H-1,2-dithiol-3-ylidene]methyl]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3H-1,2-Dithiole, 1,2-dithiol-1-ium deriv.
FS 3D CONCORD
MF C18 H19 O S4
LC STN Files: CA, CAPLUS



1 REFERENCES IN FILE CA (1957 TO DATE)
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 79:105115

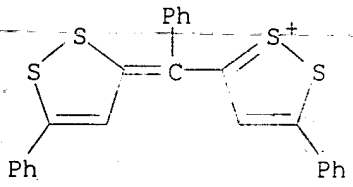
L3 ANSWER 34 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 50412-89-0 REGISTRY
CN 1,2-Dithiol-1-ium, 3-[[5-(4-chlorophenyl)-3H-1,2-dithiol-3-ylidene]methyl]-5-(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3H-1,2-Dithiole, 1,2-dithiol-1-ium deriv.
FS 3D CONCORD
MF C17 H16 Cl S4
LC STN Files: CA, CAPLUS



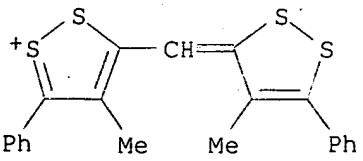
1 REFERENCES IN FILE CA (1957 TO DATE)
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 79:105115

L3 ANSWER 37 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 47617-04-9 REGISTRY
CN 1,2-Dithiol-1-ium, 3-phenyl-5-[phenyl(5-phenyl-3H-1,2-dithiol-3-ylidene)methyl]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3H-1,2-Dithiole, 1,2-dithiol-1-ium deriv.
FS 3D CONCORD
MF C25 H17 S4
CI COM

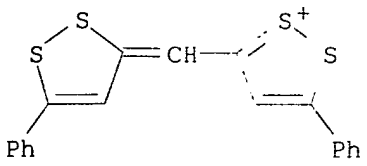


L3 ANSWER 38 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 47447-82-5 REGISTRY
CN 1,2-Dithiol-1-ium, 4-methyl-3-[(4-methyl-5-phenyl-3H-1,2-dithiol-3-ylidene)methyl]-5-phenyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3H-1,2-Dithiole, 1,2-dithiol-1-ium deriv.
FS 3D CONCORD
MF C21 H17 S4
CI COM

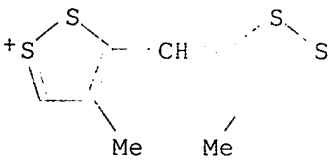


L3 ANSWER 40 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 47304-32-5 REGISTRY

CN 1,2-Dithiol-1-ium, 3-phenyl-5-[(5-phenyl-3H-1,2-dithiol-3-ylidene)methyl]-
(9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3H-1,2-Dithiole, 1,2-dithiol-1-ium deriv.
FS 3D CONCORD
DR 47304-31-4
MF C19 H13 S4
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)



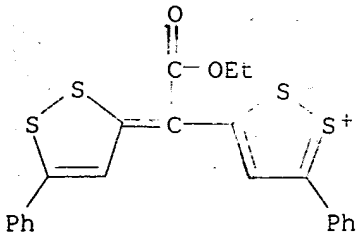
L3 ANSWER 42 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 46201-05-2 REGISTRY
CN 1,2-Dithiol-1-ium, 4-methyl-3-[(4-methyl-3H-1,2-dithiol-3-ylidene)methyl]-
(9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3H-1,2-Dithiole, 1,2-dithiol-1-ium deriv.
FS 3D CONCORD
MF C9 H9 S4
CI COM
LC STN Files: CA, CAPLUS



1 REFERENCES IN FILE CA (1957 TO DATE)
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 80:16415

L3 ANSWER 44 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 39945-12-5 REGISTRY
CN 1,2-Dithiol-1-ium, 3-[2-ethoxy-2-oxo-1-(5-phenyl-3H-1,2-dithiol-3-
ylidene)ethyl]-5-phenyl-, chloride (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3H-1,2-Dithiole, 1,2-dithiol-1-ium deriv.
MF C22 H17 O2 S4 . Cl
LC STN Files: CA, CAPLUS

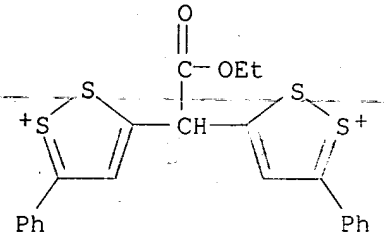


● Cl^-

1 REFERENCES IN FILE CA (1957 TO DATE)
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 78:57246

L3 ANSWER 45 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 39921-41-0 REGISTRY
CN 1,2-Dithiol-1-ium, 3,3'-(2-ethoxy-2-oxoethylidene)bis[5-phenyl-, dichloride (9CI) (CA INDEX NAME)
MF C22 H18 O2 S4 . 2 Cl
LC STN Files: CA, CAPLUS



● 2 Cl^-

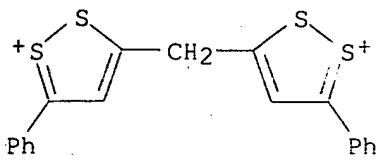
1 REFERENCES IN FILE CA (1957 TO DATE)
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 78:57246

L3 ANSWER 46 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 39859-08-0 REGISTRY
CN 1,2-Dithiol-1-ium, 3,3'-methylenebis[5-phenyl-, diperchlorate (9CI) (CA INDEX NAME)
MF C19 H14 S4 . 2 Cl O4
LC STN Files: CA, CAPLUS

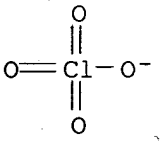
CM 1

CRN 47304-30-3
CMF C19 H14 S4



CM 2

CRN 14797-73-0
CMF Cl O4



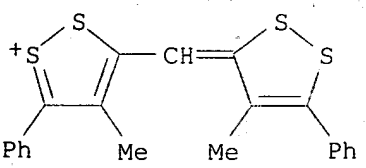
1 REFERENCES IN FILE CA (1957 TO DATE)
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 78:57246

L3 ANSWER 51 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 39858-93-0 REGISTRY
CN 1,2-Dithiol-1-ium, 4-methyl-3-[(4-methyl-5-phenyl-3H-1,2-dithiol-3-ylidene)methyl]-5-phenyl-, perchlorate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3H-1,2-Dithiole, 1,2-dithiol-1-ium deriv.
MF C21 H17 S4 . Cl O4
LC STN Files: CA, CAPLUS

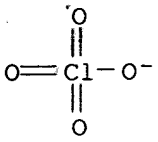
CM 1

CRN 47447-82-5
CMF C21 H17 S4



CM 2

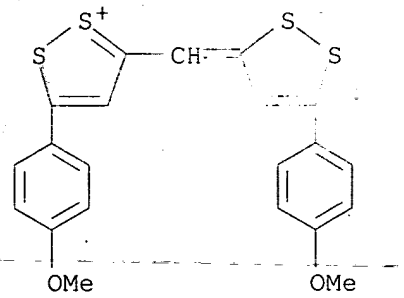
CRN 14797-73-0
CMF Cl O4



1 REFERENCES IN FILE CA (1957 TO DATE)
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 78:57246

L3 ANSWER 53 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 35093-36-8 REGISTRY
CN 1,2-Dithiol-1-ium, 3-(4-methoxyphenyl)-5-[[5-(4-methoxyphenyl)-3H-1,2-dithiol-3-ylidene]methyl]-, iodide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3H-1,2-Dithiole, 1,2-dithiol-1-ium deriv.
MF C21 H17 O2 S4 . I
LC STN Files: CA, CAPLUS



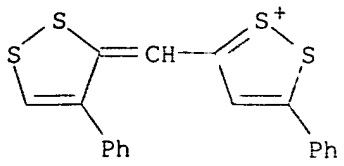
● I^-

2 REFERENCES IN FILE CA (1957 TO DATE)
2 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 79:105115

REFERENCE 2: 76:72440

L3 ANSWER 54 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 15139-87-4 REGISTRY
CN 1,2-Dithiol-1-ium, 3-phenyl-5-[(4-phenyl-3H-1,2-dithiol-3-ylidene)methyl]-, iodide (8CI) (CA INDEX NAME)
MF C19 H13 S4 . I
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB



● I^-

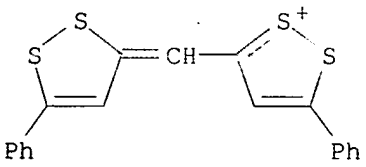
1 REFERENCES IN FILE CA (1957 TO DATE)
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 66:105899

L3 ANSWER 56 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 14969-83-6 REGISTRY
CN 1,2-Dithiol-1-ium, 3-phenyl-5-[(5-phenyl-3H-1,2-dithiol-3-ylidene)methyl]-, methyl sulfate (8CI) (CA INDEX NAME)
MF C19 H13 S4 . C H3 O4 S
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB

CM 1

CRN 47304-32-5
CMF C19 H13 S4



CM 2

CRN 21228-90-0
CMF C H3 O4 S

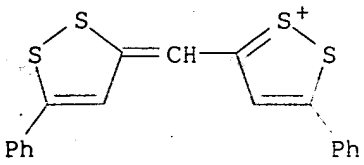
$Me-O-SO_3^-$

1 REFERENCES IN FILE CA (1957 TO DATE)
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 66:105899

L3 ANSWER 62 OF 62 REGISTRY COPYRIGHT 2003 ACS
RN 5676-45-9 REGISTRY
CN 1,2-Dithiol-1-ium, 3-phenyl-5-[(5-phenyl-3H-1,2-dithiol-3-ylidene)methyl]-, iodide (8CI, 9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3-Phenyl-5-[(5-phenyl-3H-1,2-dithiol-3-ylidene)methyl]-1,2-dithiol-1-ium iodide (7CI)
CN 3H-1,2-Dithiole, 1,2-dithiol-1-ium deriv.
DR 13402-74-9

MF C19 H13 S4 . I
LC STN Files: CA, CAOLD, CAPLUS
CRN (47304-32-5)



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3 REFERENCES IN FILE CA (1957 TO DATE)
3 REFERENCES IN FILE CAPLUS (1957 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 79:105115

REFERENCE 2: 65:56766

REFERENCE 3: 64:8031